

Serial No. 10/683,649

REMARKS

Claims 1-33 are pending in the application and are subject to a restriction requirement. Claim 18 has been amended herein. In response to the Restriction requirement, Applicants hereby elect Group I (claims 1-17) with traverse.

Method claim 18 utilizes substantially the same language as apparatus claim 1. Further, method claim 18 merely recites the steps involved in forming the respective features of the apparatus, without reciting additional processing steps.

According to MPEP §803, the criteria for restriction between patentably distinct inventions are:

- (A) The inventions **must be independent** (see MPEP § 802.01, § 806.04, § 808.01) **or distinct as claimed** (see MPEP § 806.05 - § 806.05(i)); and
(B) There must be a serious burden on the examiner if restriction is required (see MPEP § 803.02, § 806.04(a) - § 806.04(i), § 808.01(a), and § 808.02). (Emphasis added)

Further, according to MPEP §806.05(f),

A process of making and a product made by the process can be shown to be distinct inventions if either or both of the following can be shown: (A) that the process as claimed is not an obvious process of making the product and the process as claimed can be used to make other and different products; or (B) that the product as claimed can be made by another and materially different process.

The term "independent" means that there is no disclosed relationship between the two or more subject.¹ In the present case, claims 1 and 18 both relate to a memory cell having the same features. Clearly, there is a relationship between method claim 18 and apparatus claim 1. Thus, the claims are not independent from one another.

With respect to "distinctiveness", claim 1 and 18 are shown below with the corresponding portions of each claim grouped together.

1. - a semiconductor substrate having at least one trench formed in a surface thereof;
18. - forming at least one trench in a surface of a semiconductor substrate;

1. - a recessed channel region of a first conductivity type semiconductor formed in the semiconductor substrate at the bottom of each trench;

¹ See MPEP §802.01

Serial No. 10/683,649

18. - forming a recessed channel region of a first conductivity type semiconductor in the semiconductor substrate at the bottom of each trench;

1. - a source region and a drain region both of a second conductivity type semiconductor formed in the semiconductor substrate on opposing sides of each trench;

18. - forming a source region and a drain region both of a second conductivity type semiconductor in the semiconductor substrate on opposing sides of each trench;

1. - a gate dielectric layer formed on the semiconductor substrate, said gate dielectric layer being formed along the bottom and sidewalls of the trench;

18. - forming a gate dielectric layer on the semiconductor substrate, said gate dielectric layer being formed along the bottom and sidewalls of the trench;

1. - a control gate layer formed over the gate dielectric layer above the recessed channel region

18. - forming a control gate layer over the gate dielectric layer above the recessed channel region.

The apparatus of claim 1 cannot be obtained by a materially different process than recited in method claim 18, as the steps of claim 18 recite forming each feature of the apparatus. Altering the method as recited in claim 18 will alter the resulting apparatus.

Additionally, it has not been shown that the process as claimed is not an obvious process of making the apparatus. Thus, method claim 18 is not distinct from apparatus claim 1.

Further, according to MPEP §806.05(i)

Where an application contains claims to a product, claims to a process specially adapted for (i.e., not patentably distinct from, as defined in MPEP § 806.05(f)) making the product, and claims to a process of using the product, and the product claims are not allowable (i.e., not novel and nonobvious), restriction is proper between the process of making and the process of using. In this instance, ***applicant may be required to elect either (A) the product and process of making it; or (B) the process of using.*** Unless the examiner can make a showing of distinctness between the process of using and the product (MPEP § 806.05(h)), the product must also be joined with the process of using in grouping (B). (Emphasis added).

Clearly, MPEP §806.05(i) supports Applicant's contention method claim 18 and apparatus claim 1 should be examined without restriction.

It is respectfully submitted that method claim 18 is neither independent nor distinct from apparatus claim 1 and, therefore, restriction of claims 1-33 is improper. Accordingly, examination of all claims is respectfully requested.

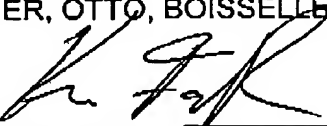
Serial No. 10/683,649

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should a petition for an extension of time be necessary for the timely reply to the outstanding Office Action (or if such a petition has been made and an additional extension is necessary), petition is hereby made and the Commissioner is authorized to charge any fees (including additional claim fees) to Deposit Account No. 18-0988.

Respectfully submitted,
RENNER, OTTO, BOISSELLE & SKLAR, LLP

By



Kenneth W. Pafarak
Registration No. 50,689

1621 Euclid Ave. - 19th Floor
Cleveland, Ohio 44116
(216) 621-1113

B:\AMD\PH0577US\AMDSPH0577US RestrictionReply.wpd